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FILE COVERS 1907 - 19 Aug 2005 VOL 143 ISS 9

FILE LAST UPDATED: 18 Aug 2005 (20050818/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s crown ethers

34796 CROWN

142879 ETHERS

L1 8568 CROWN ETHERS

(CROWN (W) ETHERS)

=> s l1 and amination

28578 AMINATION

L2 41 L1 AND AMINATION

=> d 1-11 fbib abs fhitr

L2 ANSWER 1 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:167279 CAPLUS

DN 142:411337

TI A facile and efficient synthetic approach to novel lariat macrocyclic diamides and bis macrocyclic diamides

AU Abbas, Ashraf A.; Elwahy, Ahmed H. M.; Ahmed, Ahmed A. M.

CS Department of Chemistry, Faculty of Science, Cairo University, Giza, Egypt

SO Journal of Heterocyclic Chemistry (2005), 42(1), 93-101

CODEN: JHTCAD; ISSN: 0022-152X

PB HeteroCorporation

DT Journal
LA English
AB Hydroxy macrocycles were prepared in 40-55% yields by reacting (2-KOC6H4CONH)2(CH2)n [I, n = 2-4] with epichlorohydrin or HOCH(CH2OC6H4CH2Cl-2)2. The hydroxyl group in the macrocycles was esterified with ClCH2COCl. Reaction of the esters with amines and phenoxides furnished exclusively the target lariat macrocycles. **Amination** of two equivalent of the chloroacetates with piperazine afforded the corresponding bismacrocycles. Novel bis(macrocycles) were prepared by reacting the chloroacetates with I, (2-KOC6H4O)2(CH2)3, and 2,4-(KO)2C6H3CHO.

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:60546 CAPLUS
TI The synthesis and pharmacological evaluation of (±)-2,3-seco-fentanyl analogues
AU Ivanovic, M. D.; Micovic, I. V.; Vuckovic, S.; Prostran, M.; Todorovic, Z.; Ivanovic, E. R.; Kiricojevic, V. D.; Djordjevic, J. B.; Dosen-Micovic, L. J.
CS Faculty of Chemistry, University of Belgrade, Belgrade, 11000, Yugoslavia
SO Journal of the Serbian Chemical Society (2004), 69(11), 955-968
CODEN: JSCSEN; ISSN: 0352-5139
PB Serbian Chemical Society
DT Journal
LA English
AB An efficient, five-step synthetic approach to various acyclic 1,3-diamines has been developed and applied to the preparation of a novel class of open-chained fentanyl analogs. The acyclic derivs. 5.1-5.5 (all new compds.) were synthesized with the aim of estimating the significance of the piperidine ring for the opioid analgesic activity of anilido-piperidines. The starting β-keto-amide 1.1, prepared by the aminolysis of Me acetoacetate with methylphenethylamine, (93% yield), was successively reacted with NaH and BuLi, to form the highly reactive α,γ-dienolate anion 1.1a. Regio and chemoselective γ-alkylation of the dienolate with various primary and secondary alkyl halides furnished the β-keto-amides 1.2-1.5 (76-91 %). Reductive **amination** of the keto-amides 1.1-1.5 with aniline and Zn powder in acetic acid, via the enamine intermediates 2.1-2.5, afforded the β-anilino amides 3.1-3.5 (74-85 %). After reductive deoxygenation of the tertiary amide group, using in situ generated diborane, the corresponding 1,3-diamines 4.1-4.5 were obtained (87-97 %). The synthesis of (±)-2,3-seco-fentanyls 5.1-5.5 was completed by N-acylation of the diamines 4.1-4.5 with propionyl chloride, followed by precipitation of the monooxalate salts (86-95 %). The parent compound, 2,3-seco-fentanyl 5.1, was found to be a 40 times less potent narcotic analgesic than fentanyl but still 5-6 times more active than morphine in rats, while i-Pr derivative 5.3 was inactive. Apart from the pharmacol. significance, the general procedure described herein may afford various functionalized, 1,3-diamines as potential complexing agents and building blocks for the synthesis of **aza-crown ethers**.

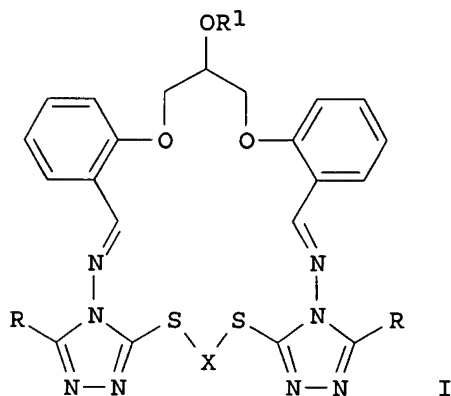
RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:968062 CAPLUS
DN 142:114031
TI Synthesis of N-aryl-aza-**crown ethers** via Pd-catalyzed **amination** reactions of aryl chlorides with aza-**crown ethers**
AU Urgaonkar, Sameer; Verkade, John G.
CS Department of Chemistry, Iowa State University, Ames, IA, 50011, USA
SO Tetrahedron (2004), 60(51), 11837-11842
CODEN: TETRAB; ISSN: 0040-4020

PB Elsevier B.V.
 DT Journal
 LA English
 OS CASREACT 142:114031
 AB The Pd₂(dba)₃/P(i-BuNCH₂CH₂)₃N catalyst system effectively catalyzes the coupling of aza-crown ethers with electronically diverse aryl chlorides, affording N-aryl-aza-crown ethers in good yields. The Pd₂(dba)₃/P(i-BuNCH₂)₃Me catalyst system containing the more constrained bicyclic triaminophosphine is useful for aryl chlorides possessing base-sensitive ester, nitro, and nitrile functional groups.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:75165 CAPLUS
 DN 140:321345
 TI Synthesis of novel lariat azathia crown macrocycles containing two triazole rings and bis crown macrocycles containing four triazole rings
 AU Abbas, Ashraf A.
 CS Faculty of Science, Department of Chemistry, Cairo University, Giza, 12613, Egypt
 SO Tetrahedron (2004), 60(7), 1541-1548
 CODEN: TETRAB; ISSN: 0040-4020
 PB Elsevier Science B.V.
 DT Journal
 LA English
 GI



AB The 13-hydroxy macrocycles I [R = Ph, Bn; X = (CH₂)₃, (CH₂)₄; R₁ = H] were prepared in 40-50% yields by the condensation of 1,ω-bis(4-amino-1,2,4-triazol-3-ylsulfany)alkanes with 1,3-bis(2-formylphenoxy)-2-propanol. Acylation of I (R₁ = H) with 2-chloroacetyl chloride gave the corresponding esters. Amination of these esters with different amines in acetone furnished exclusively the target lariat macrocycles, e.g. I (R₁ = COCH₂NEt₂), in 60-70% yields. Reaction of 2 equivalent of the macrocycle esters with 1 equivalent of piperazine afforded novel bis macrocycles in 50-60% yields. Reduction of I (R₁ = H) with NaBH₄ afforded the corresponding 13-hydroxyazathia crown ethers in 65-70% yields.

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

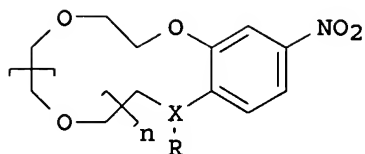
L2 ANSWER 5 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:949742 CAPLUS
 DN 140:235385
 TI Substituent effects in the binding of bis(4-fluorobenzyl)ammonium ions by

dianilino[24]crown-8
 AU Chiu, Sheng-Hsien; Liao, Kang-Shyang; Su, Jen-Kuan
 CS Department of Chemistry, National Taiwan University, Taipei, 10617, Taiwan
 SO Tetrahedron Letters (2004), 45(1), 213-216
 CODEN: TELEAY; ISSN: 0040-4039
 PB Elsevier Science B.V.
 DT Journal
 LA English
 OS CASREACT 140:235385
 AB Para-substituted dianilino[24]crown-8 (DA24C8) macrocycles were synthesized and their ability to form host-guest complexes with bis(4-fluorobenzyl)ammonium ions (DFA+) were studied. Although these **crown ethers** contain weakly H bonding aniline motifs, they do bind DFA+ in CDCl₃/CD₃NO₂ solution, presumably in a pseudorotaxane-like manner. A plot of the values of the relative binding strengths (log[Ka(R)/Ka(H)]) vs. the Hammett substituent consts. σ^+ of the groups at the para-position of the aniline units suggests that a linear free energy correlation exists for this self-assembly process. The strength of the binding between the crown ether and the thread-like ion can be fine-tuned over a narrow range by judicious choice of the substituting groups.

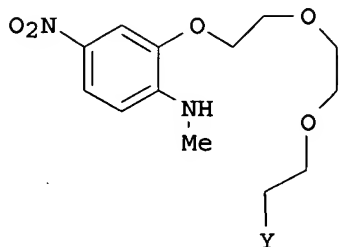
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:936890 CAPLUS
 DN 141:23560
 TI A preparation of benzoazacrown ether derivatives from benzocrown ether derivatives
 IN Gromov, S. P.; Dmitrieva, S. N.; Churakova, M. V.
 PA Russia
 SO Russ., No pp. given
 CODEN: RUXXE7
 DT Patent
 LA Russian
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	RU 2215738	C1	20031110	RU 2002-118852	20020717
				RU 2002-118852	20020717
OS	MARPAT 141:23560				
GI					



I



II

AB The invention relates to novel nitro-derivs. of N-alkylbenzoazacrown ether of formula I [wherein: R is alkyl; X = N; n = 1-4]. These compds. can be used as selective reagents for cations of ammonium, alkaline or alkaline-earth metals. The stability constns. of I [R is alkyl; X = N; n = 1-4] with NaClO₄, NH₄ClO₄, Mg(ClO₄)₂, Ba(ClO₄)₂, and Ca(ClO₄)₂ were determined. For instance, compound I (R = Me, X = N, n = 1) was prepared via **amination** /ring opening of I (no R, X = O, n = 1) by methylamine (example 1), chlorination of the obtained II (Y = OH) by SOCl₂ (example 4), iodination of the obtained II (Y = Cl, example 7), and subsequent cyclization (example 10).

L2 ANSWER 7 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:789293 CAPLUS

DN 140:305759

TI Method for preparing fluorine-containing anilines from polyfluorinated benzotrifluorides

IN Bil'dinov, I. K.; Podsevalov, P. V.

PA Obshchestvo s Ogranichennoi Otvetstvennost'yu Nauchno-Vnedrencheskaya Firma "Okta", Russia

SO Russ., No pp. given

CODEN: RUXXE7

DT Patent

LA Russian

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RU 2209810	C2	20030810	RU 2001-128791	20011025
	WO 2003035483	A3	20030807	WO 2002-RU464	20021017
	W: JP, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
				RU 2001-128791	A 20011025

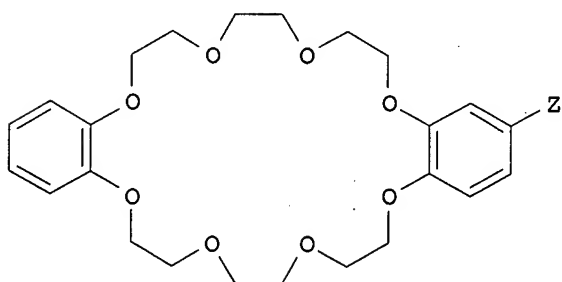
OS MARPAT 140:305759

AB Fluorine-containing anilines NH₂C₆H₄X₁X₂X₃X₄X₅ (X₁-X₅ = fluorine, chlorine, bromine, iodine or hydrogen atoms; being at least one of them is a fluorine atom and another is a hydrogen atom; e.g., 2,6-dichloro-3,5-difluoroaniline) are prepared by the initial substitution of a fluorine atom in the benzene ring of a polyfluorinated benzotrifluoride CF₃C₆F₂Z₁Z₂Z₃Z₄Z₅ (Z₁-Z₅ = fluorine, chlorine, bromine, iodine, hydrogen; where at least two

of them are fluorine atoms; e.g., 3,5-dichloro-2,4,6-trifluorobenzotrifluoride) for the amino group by an aminating agent to form a fluorine-containing aminobenzotrifluoride where the trifluoromethyl group is replaced for hydrogen atom by heating in a mineral acid medium (e.g., 90% sulfuric acid). Ammonia or ammonia in a solvent (e.g., water or C<5 alcs. or ether) is used as the aminating agent. The process is carried out in autoclave at 40-140° in the presence of a phase-transfer **amination** catalyst which is a quaternary ammonium or phosphonium compound [e.g., tetrakis(diethylamino)phosphonium bromide], a crown ether, or a guanidinium salt.

L2 ANSWER 8 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:478996 CAPLUS
 DN 139:53046
 TI Preparation of dibenzo-24-crown-8-ether derivatives and their pseudorotaxane-like structures
 IN Asakawa, Masumi; Hiramoto, Mayumi; Shimizu, Toshimi
 PA National Institute of Advanced Industrial Science and Technology, Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2003176284	A2	20030624	JP 2001-379476	20011213
				JP 2001-379476	20011213
OS	MARPAT 139:53046				
GI					



AB The derivs. I (Z = CH₂NHCH₂C₆H₄R-p; R = reactive substituents small enough to be threaded through the ether ring), are prepared by treatment of I (Z = formyl) with H₂NCH₂C₆H₄R-p (R = same as above) and hydrogenation. The diHX salt of the threaded dimer of I (R = same as above, X- = anion), useful as starting materials for low-temperature elastomers, high-elastic rubbers, etc., are prepared by protonation and spontaneous dimerization of the derivs. Thus, I (Z = formyl) was treated with 4-aminobenzylamine, hydrogenated with NaBH₄, and treated with CF₃CO₂H to give the bis-TFA salt of the threaded dimer of I (R = NH₂).

L2 ANSWER 9 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:312687 CAPLUS
 DN 138:321008
 TI Method for preparing 4-nitroso-substituted aromatic amines from aromatic nitro compounds and carboxamides in the presence of a base
 IN Joo, Young-J.; Kim, Jin-Eok; Won, Jeong-Im
 PA Korea Kumho Petrochemical Co., Ltd., S. Korea
 SO U.S., 6 pp.
 CODEN: USXXAM
 DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 6552229	B1	20030422	US 2002-209263	20020731
				KR 2001-67382	A 20011031
	KR 2003035343	A	20030509	KR 2001-67382	20011031
	WO 2003037831	A2	20030508	WO 2002-KR1181	20020621
	WO 2003037831	A3	20031120		
	W: AU, BR, CA, CN, CZ, HU, JP, PL, RU, SK, UA				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				
	PT, SE, TR				
				KR 2001-67382	A 20011031

OS CASREACT 138:321008; MARPAT 138:321008

AB 4-Nitroso-substituted aromatic amines (e.g., 4-nitrosoaniline) are prepared by reacting an amide compound (e.g., acetamide) with a nitroarom. compound (e.g., nitrobenzene) in the presence of a base (e.g., potassium hydroxide) and a solvent (e.g., DMSO) so as to directly prepare a 4-nitroso-substituted aromatic amine as the main product and a 4-nitro-substituted aromatic amine (e.g., 4-nitroaniline) as the byproduct without producing 4-nitroso- or 4-nitro-substituted amides as an intermediate. This process can be practised on an industrial scale.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:59602 CAPLUS

DN 138:73066

TI Preparation of triphenylamine derivatives

IN Xue, Minchao; Huang, Deyin; Liu, Yangang

PA Shanghai Jiaotong Univ., Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	CN 1322710	A	20011121	CN 2001-112714	20010426
				CN 2001-112714	20010426

OS CASREACT 138:73066

AB The process comprises diazotizing aromatic amine with NaNO₂/HCl, substituting with KI to obtain aromatic iodide, substituting with diarylamine in the presence of 1-5% phase-transfer catalyst [dibenzo-18-crown-6/18-crown-6 (3:1)] to obtain triphenylamine derivative, and recovering KI from mother

liquid

for recycle use.

L2 ANSWER 11 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:332770 CAPLUS

DN 137:46885

TI Luminescence and Structural Comparisons of Strong-Acid Sensor Molecules. 2

AU Kampmann, Brian; Lian, Yiqian; Klinkel, Kortney L.; Vecchi, Paul A.;

Quiring, Heidi L.; Soh, Chin Chen; Sykes, Andrew G.

CS Department of Chemistry, University of South Dakota, Vermillion, SD, 57069, USA

SO Journal of Organic Chemistry (2002), 67(11), 3878-3883

CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society

DT Journal

LA English

OS CASREACT 137:46885

AB Anthraquinone-containing cyclic polyether hosts form 1:1 complexes with hydronium ion, producing large enhancements in luminescence via inversion of n π * and $\pi\pi$ * excited states. We have characterized the binding of hydronium ion within these host mols. and have synthesized a large

variety of analogous hosts that contain different structural and electronic features that allow better understanding of what controls binding and luminescence capacity in this class of fluorescent sensor mols. X-ray crystallog. of an anthraquinone host that contains terminal amine functional groups rather than terminal ether groups is investigated, and complete proton transfer to carbonyl groups is observed in concentrated sulfuric acid media that also produces a previously unobserved luminescence.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FIL STNGUIDE

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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

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LAST RELOADED: Aug 12, 2005 (20050812/UP).

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FILE 'CAPLUS' ENTERED AT 18:12:29 ON 19 AUG 2005

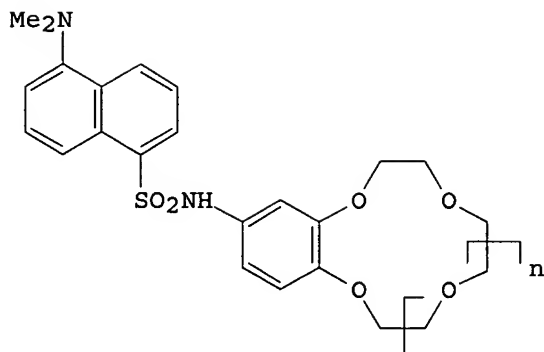
L1 8568 S CROWN ETHERS
L2 41 S L1 AND AMINATION

FILE 'STNGUIDE' ENTERED AT 18:13:40 ON 19 AUG 2005

=> d l2 30-41 fbib abs fhitr

YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS' - CONTINUE? (Y)/N:y

L2 ANSWER 30 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1988:630983 CAPLUS
DN 109:230983
TI Synthesis of 4'-(dansylamino)benzo crown ethers and
4'-[1-(dansylamino)ethyl]benzo-15-crown-5
AU Huang, Shu; Tian, Baozhi
CS Dep. Chem., Sichuan Univ., Chengdu, Peop. Rep. China
SO Huaxue Xuebao (1988), 46(6), 604-7
CODEN: HHHPA4; ISSN: 0567-7351
DT Journal
LA Chinese
OS CASREACT 109:230983
GI



I

AB Three 4'-(dansylamino)benzo **crown ethers** I ($n = 1, 2, 3$) have been synthesized from B12C4, B15C5, and B18C6 via nitration, catalytic hydrogenation and dansylation successively. The other one, 4'-[α -(dansylamino)ethyl]benzo-15-crown-5, has also been synthesized but from B15C5 via acetylation, Leuckart reaction and dansylation. These dansylamino derivs. are new species of fluorescent **crown ethers**.

L2 ANSWER 31 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1987:636681 CAPLUS
 DN 107:236681
 TI New derivatives of 2,4- and 2,6-dinitroanilines
 AU Ivanov, E. I.; Fedorova, G. V.
 CS Fiz.-Khim. Inst., Odessa, USSR
 SO Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1986), 52(11), 1215-17
 CODEN: UKZHAU; ISSN: 0041-6045
 DT Journal
 LA Russian
 OS CASREACT 107:236681
 GI

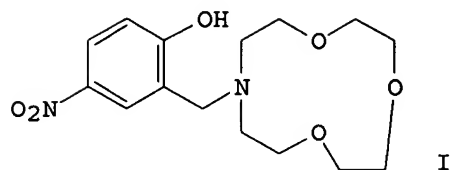
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Treating nitro compds. I ($R = O_2N$, $R_1 = CPh$, CO_2Me ; $R = MeO_2C$, HO_2C , $R_1 = NO_2$) with piperidine, morpholine, or piperazine gave 80-95% heterocycles II ($X = CH_2$, O , NH). Similarly obtained were 70-92% azoles III ($X_1 = N$, CH), 80-92% **crown ethers** IV, and 77-84% **crown ethers** V.

L2 ANSWER 32 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1987:423370 CAPLUS
 DN 107:23370
 TI A chromogenic aza-12-crown-4 ether and its use in the detection of lithium
 IN Pacey, Gilbert E.; Sasaki, Kenichi
 PA Miami University, USA
 SO U.S., 12 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	----	-----	-----
PI	US 4659815	A	19870421	US 1985-698019	19850204
	US 4734376	A	19880329	US 1986-921459	19861022
				US 1985-698019	A3 19850204

OS CASREACT 107:23370
GI



AB The title compound (I) was prepared via cyclocondensation of $\text{PhCH}_2\text{N}(\text{CH}_2\text{CH}_2\text{OH})_2$ with $(\text{ClCH}_2\text{CH}_2)_2\text{O}$ followed by hydrogenolysis of the benzyl group and N-alkylation using 2,5-HO(O₂N)C₆H₃CH₂Br. Li^+ in the ppm range was determined photometrically using a reagent composition containing I.

L2 ANSWER 33 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1987:50174 CAPLUS

DN 106:50174

TI Synthesis of sulfur and nitrogen analogs of monooxo crown
ethers

AU Matsushima, Kenji; Nakatsuji, Yohji; Kawamura, Norio; Okahara, Mitsuo

CS Fac. Sci. Technol., Kinki Univ., Osaka, 577, Japan

SO Journal of Heterocyclic Chemistry (1986), 23(1), 255-6.

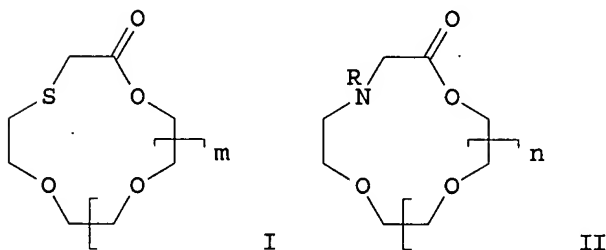
CODEN: JHTCAD; ISSN: 0022-152X

DT Journal

LA English

OS CASREACT 106:50174

GI



AB Title compds., I ($m = 1, 2, 3$) and II ($R = \text{Ph, hexyl}; n = 1, 2$) were prepared via intramol. cyclization of the corresponding thia or aza oligoethylene glycol carboxymethyl ethers by using PhSO_2Cl in the presence of alkali metal carbonates.

L2 ANSWER 34 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:571295 CAPLUS

DN 101:171295

TI Crown ethers having a bisaminomethyl group

PA Ajinomoto Co., Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

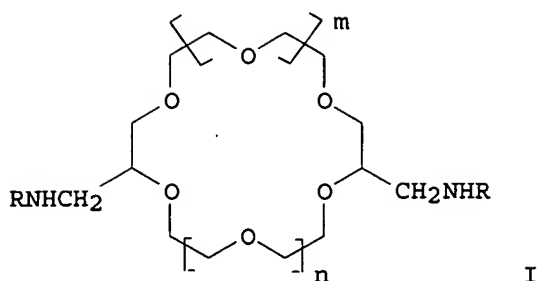
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 59062583	A2	19840410	JP 1982-171662	19820930
	JP 03029075	B4	19910423		
				JP 1982-171662	19820930

GI



AB Title compds. I (R, m, n = C₆H₁₃, 0, 1; C₆H₁₃, 0, 2; C₆H₁₃, 1, 1; H, 0, 1; Et, 0, 1; Et, 1, 2) were prepared by reaction of RNHCH₂CH(OH)CH₂OCH₂(CH₂OCH₂)_mCH₂OCH₂CH(OH)CH₂NHR (II) with XCH₂(CH₂OCH₂)_nCH₂X III [X = halo, OSO₂R₁ (R₁ = alkyl, aryl, aralkyl)] in the presence of metal compds. having molding effect. Thus, 11.3 g II (R = C₆H₁₃, m = 0) was refluxed with 1.38 g Na in n-BuOH 1 h, 12.4 g III (X = TsO, n = 1) in dioxane added during 1.5 h at 60°, and the whole kept 2 h at 60° to give 62% I (R = C₆H₁₃, m = 0, n = 1).

L2 ANSWER 35 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1984:472705 CAPLUS

DN 101:72705

TI One-step synthesis of dihydroxyazacrown ethers

AU Kikui, Takashi; Maeda, Hirokazu; Nakatsuji, Yohji; Okahara, Mitsuo

CS Fac. Eng., Osaka Univ., Suita, 565, Japan

SO Synthesis (1984), (1), 74-6

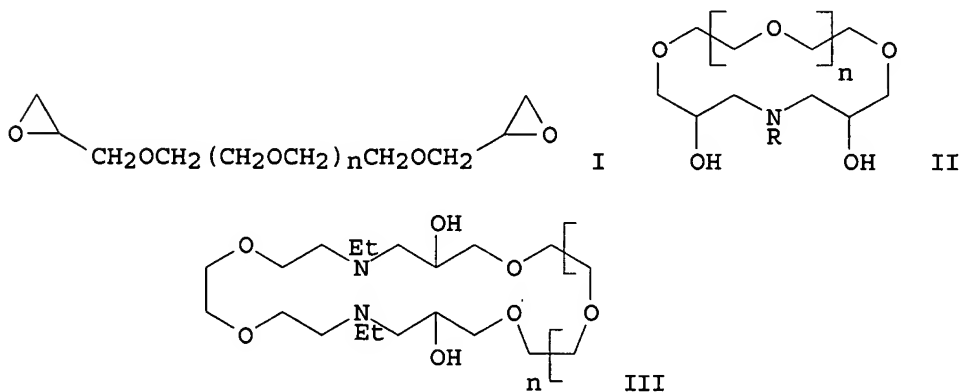
CODEN: SYNTBF; ISSN: 0039-7881

DT Journal

LA English

OS CASREACT 101:72705

GI



AB Cyclocondensation of glycidyl ethers I (n = 1-3) with RNH₂ (R = Et, H, HOCH₂CH₂, EtCHMe, decyl, Ph) in H₂O, MeOH, Me₃COH, or DMSO gave dihydroxy azacrown ethers II in 6-49% yields. Cyclocondensation of (EtNHCH₂CH₂OCH₂)₂ with I (n = 0,1) gave diazacrown ethers III in 30 and 22; yields, resp.

L2 ANSWER 36 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:594938 CAPLUS

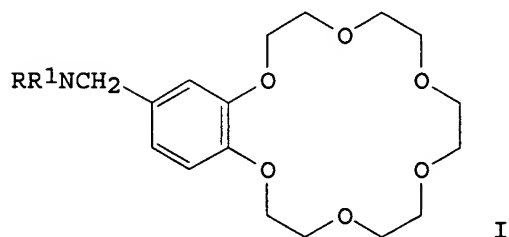
DN 99:194938

TI Chemistry of heterocyclic compounds. Part 85. Nicotinic acid
crown ethers: synthesis, complexation and reduction
AU Newkome, George R.; Marston, Charles R.
CS Dep. Chem., Louisiana State Univ., Baton Rouge, LA, 70803-1804, USA
SO Tetrahedron (1983), 39(12), 2001-8
CODEN: TETRAB; ISSN: 0040-4020
DT Journal
LA English
OS CASREACT 99:194938
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB 2,6-Bis(bromomethyl)nicotinic oxazoline (I), prepared from Et
2,6-dimethylnicotinate, was converted into the 1:1-macrocyclic oxazolines
II (n = 2,3) and III (R = H) as well as isomeric macrocyclic dimers. Et
2,6-bis(bromomethyl)nicotinate was converted to the corresponding
1:1-dibenzo-18-crown-6 macrocyclic analog IV. NMR and mass spectral data
were used to ascertain the macrocyclic structures. Reaction of III (R =
H) with EtMgBr afforded, after oxidation, the 4-substituted pyridino
macrocycle III (R = Et) in high yield.

L2 ANSWER 37 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1983:453724 CAPLUS
DN 99:53724
TI Synthesis of 4'-N-alkyl(aryl)aminomethyl benzo-18-crown-6 and polymer- and
silica-supported **crown ethers**
AU Wu, Zhenzhong; Jin, Xiaoli; Guo, Huiju; Huang, Guohua; Xu, Yuanyao
CS Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, Peop. Rep. China
SO Youji Huaxue (1983), (2), 110-14
CODEN: YCHHDX; ISSN: 0253-2786
DT Journal
LA Chinese
GI



AB The title **crown ethers** (I; R = Pr, Bu, Ph, PhCH₂; R¹ =
H) were prepared by reductive **amination** of the aldehyde with RNH₂.
Reaction of I (R = Pr, R¹ = H) with chloromethylated polystyrene or
chlorinated silica gel gave the corresponding supported **crown**
ethers (I; R = Pr, R¹ = polystyryl and silica gel residue), which
were useful as phase-transfer catalysts for the cyanation of n-C₈H₁₇Br
(II) by NaCN or KCN with higher activity than that of polymer-supported
benzo-15-crown-5. The polymer- and silica-supported I also catalyzed the
esterification of KOAc with II.

L2 ANSWER 38 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1983:405613 CAPLUS
DN 99:5613
TI Intramolecular cyclization of N,N-bis(oligooxyethylene)amines: a new
synthesis of monoaza **crown ethers**

AU Maeda, Hirokazu; Furuyoshi, Shigeo; Nakatsuji, Yohji; Okahara, Mitsuo
CS Dep. Appl. Chem., Osaka Univ., Osaka, 565, Japan
SO Tetrahedron (1982), 38(22), 3359-62
CODEN: TETRAB; ISSN: 0040-4020

DT Journal

LA English

OS CASREACT 99:5613

AB Condensation reaction of N,N-bis(oligooxyethylene)amines with 4-MeC₆H₄SO₂Cl (I) in dioxane containing NaOH or KOH gave intermediate monotoluenesulfonates which underwent intramol. cyclization to give N-unsubstituted monoaza **crown ethers**. E.g., reaction of HO(CH₂)₂NH(CH₂OCH₂)₃CH₂OH with I in dioxane containing NaOH at 60° gave 59% monoaza 15-crown-5.

L2 ANSWER 39 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1981:569691 CAPLUS

DN 95:169691

TI Synthesis and complex formation of **crown ethers** from methyl-4,6-O-benzylidene- α -D-glucopyranoside

AU Bako, Peter; Fenichel, Laszlo; Toke, Laszlo; Czugler, Matyas

CS Tech. Univ. Budapest, Budapest, H-1521, Hung.

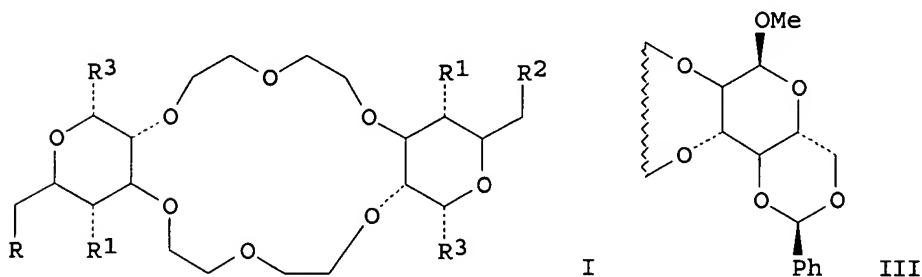
SO Liebigs Annalen der Chemie (1981), (7), 1163-71

CODEN: LACHDL; ISSN: 0170-2041

DT Journal

LA German

GI



AB The **crown ethers** I (RR₁ = R₁R₂ = OCHPhO, R₃ = OMe, II) and III were obtained by treating Me 4,6-O-benzylidene- α -D-glucopyranoside with diethylene glycol ditosylate. Acid hydrolysis of II gave I (R = R₁ = OH, R₂ = OH, OAc, R₃ = OMe; R-R₃ = OH) which were acetylated, tosylated, mesylated, and aminated. The complexation consts. of I-III with K picrate were much lower than that of dibenzo[18]crown-6.

L2 ANSWER 40 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1981:134248 CAPLUS

DN 94:134248

TI Membrane transport. A proton-driven potassium ion pump

AU Frederick, Laurel A.; Fyles, Thomas M.; Malik-Diemer, Virginia A.; Whitfield, Dennis M.

CS Dep. Chem., Univ. Victoria, Victoria, BC, V8W 2Y2, Can.

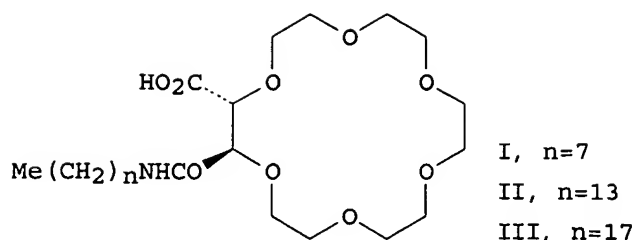
SO Journal of the Chemical Society, Chemical Communications (1980), (24), 1211-12

CODEN: JCCCAT; ISSN: 0022-4936

DT Journal

LA English

GI



AB The transport of K⁺ across a CHCl₃ membrane by the carrier **crown ethers** I, II, and III was studied using a U-tube apparatus. The K⁺ transport rate was markedly higher with II and III than with I. K⁺ extraction by III was more efficient than by II but the release rate was slower; the net maximal overall transport rate was similar for the 2 compds. K⁺ transport was coupled to counter-transport of protons. The **crown ethers** were synthesized by cyclocondensation of the bisdimethylamide of (+)-tartaric acid with 1,14-diiodo-3,6,9,12-tetraoxatetradecane followed by functionalization.

L2 ANSWER 41 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1978:547226 CAPLUS

DN 89:147226

TI Crown ether-catalyzed **amination** of alkyl halides

IN Tabushi, Iwao; Shimizu, Nobuaki

PA Idemitsu Kosan Co., Ltd., Japan; Unitika Ltd.

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53059601	A2	19780529	JP 1976-101722	19760827
	JP 55012008	B4	19800329		
				JP 1976-101722	A 19760827

AB E-hexyl chloride (1 mmol) was heated with 5 mmol NaNHAc and 1 mmol 18-crown-6, dibenzo-18-crown-6, or dicyclohexyl-18-crown-6 in MeCN for 8 h to give 20-4% N-n-hexylacetamide, vs. 3.3% by heating for 50 h without the crown ether. PhCH₂Cl or PhCH₂Br gave 43-55% PhCH₂NHAc. Similarly, alanine or phenylglycine was prepared by treating BrCHMeCO₂Et, BrCHMeCONMe₂, or BrCHPhCO₂Me with NaNH₂ or NaNHAc and 18-crown-6 in C₆H₆ at room temperature, followed by alkaline hydrolysis.

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L2 ANSWER 11 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:332770 CAPLUS

DN 137:46885

TI Luminescence and Structural Comparisons of Strong-Acid Sensor Molecules. 2

AU Kampmann, Brian; Lian, Yiqian; Klinkel, Kortney L.; Vecchi, Paul A.; Quiring, Heidi L.; Soh, Chin Chen; Sykes, Andrew G.

CS Department of Chemistry, University of South Dakota, Vermillion, SD, 57069, USA

SO Journal of Organic Chemistry (2002), 67(11), 3878-3883

CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society

DT Journal

LA English

OS CASREACT 137:46885

AB Anthraquinone-containing cyclic polyether hosts form 1:1 complexes with hydronium ion, producing large enhancements in luminescence via inversion of $\pi\pi^*$ and $\pi\pi^*$ excited states. We have characterized the binding of hydronium ion within these host mols. and have synthesized a large variety of analogous hosts that contain different structural and electronic features that allow better understanding of what controls binding and luminescence capacity in this class of fluorescent sensor mols. X-ray crystallog. of an anthraquinone host that contains terminal amine functional groups rather than terminal ether groups is investigated, and complete proton transfer to carbonyl groups is observed in concentrated sulfuric acid media that also produces a previously unobserved luminescence.

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 12 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:79598 CAPLUS

DN 136:369702

TI New diazadi (and tri) thia-21-crown-7 ethers containing 8-hydroxyquinoline side arms

AU Song, Hua-Can; Chen, Yi-Wen; Song, Ji-Guo; Savage, Paul B.; Xue, Guo-Ping; Chiara, Joseph A.; Krakowiak, Krzysztof E.; Izatt, Reed M.; Bradshaw, Jerald S.

CS Department of Chemistry, Zhongshan University, Canton, 510275, Peop. Rep. China

SO Journal of Heterocyclic Chemistry (2001), 38(6), 1369-1376
CODEN: JHTCAD; ISSN: 0022-152X

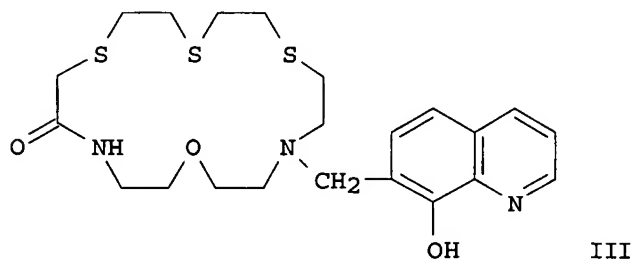
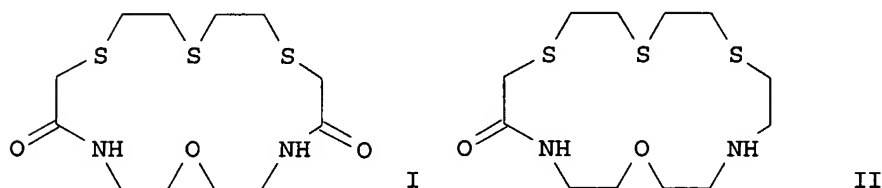
PB HeteroCorporation

DT Journal

LA English

OS CASREACT 136:369702

GI

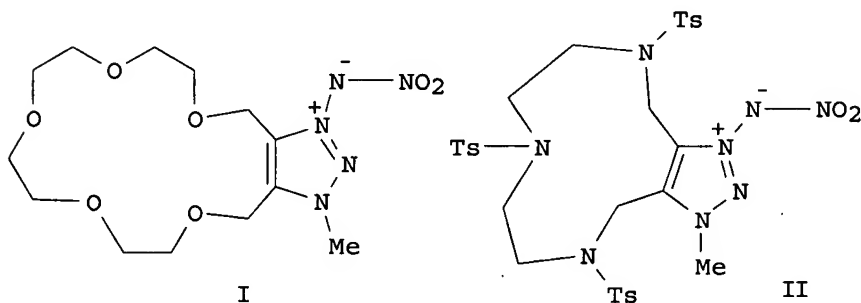


AB Macrocyclic diazadi (and tri) thiacrown ethers containing two 5-substituent-8-hydroxyquinoline side arms were synthesized from the corresponding macrocyclic diazadi (and tri) thiacrown ethers. The crown ethers were obtained by reduction of the proper macrocyclic di (and tri) thiadiazides by $\text{BH}_3\text{-THF}$ or by $\text{NaBH}_4\text{-BF}_3\cdot\text{Et}_2\text{O-THF}$.

The yields for the reduction of diamides by NaBH₄-BF₃·Et₂O-THF were higher than those by BH₃-THF. The following four methods were used to prepare macrocycles bearing two 8-hydroxyquinoline side arms: (1) Mannich reaction with 8-hydroxyquinoline; (2) Reductive amination with 8-hydroxyquinoline-2-carboxaldehyde using Na triacetoxyborohydride as the reducing agent; (3) Cyclization of N,N'-bis(8-hydroxyquinolin-2-ylmethyl)-1,2-bis(2-aminoethoxy)ethane with bis(α-chloroamide); and (4) A step-by-step process wherein a macrocyclic trithiadiamide (I) was reduced by LiAlH₄-THF to the cyclic monoamide (II), which smoothly reacted with 5-chloro-8-hydroxyquinoline to produce monosubstituted-macrocyclic monoamide (III).

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 13 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:916703 CAPLUS
DN 136:294814
TI Macrocyclic ammonio-N-nitroimines
AU Vyazkov, V. A.; Shitov, O. P.; Tartakovskii, V. A.
CS Zelinskii Institut of Organic Chemistry, Russian Academy of Sciences, Moscow, 117913, Russia
SO Russian Journal of Organic Chemistry (Translation of Zhurnal Organicheskoi Khimii) (2001), 37(7), 1038-1045
CODEN: RJOCEQ; ISSN: 1070-4280
PB MAIK Nauka/Interperiodica Publishing
DT Journal
LA English
OS CASREACT 136:294814
GI



AB Condensation of 4,5-bis(chloromethyl)-1-methyl-1,2,3-triazole with polyethylene glycols and polyethylenepolyamines gave **crown-ethers** and azacrown compds. which were converted into the corresponding N-nitroimines, e.g., I and II.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 14 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:699179 CAPLUS
DN 136:37274
TI Supramolecular Daisy Chains
AU Cantrill, Stuart J.; Youn, Gilmer J.; Stoddart, J. Fraser; Williams, David J.
CS Department of Chemistry and Biochemistry, University of California, Los Angeles, CA, 90095, USA
SO Journal of Organic Chemistry (2001), 66(21), 6857-6872
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English

OS CASREACT 136:37274

AB Two series of self-complementary daisy chain monomers, in which a secondary ammonium ion-containing arm is grafted onto a macrocycle with either a [24]- or [25]crown-8 constitution, have been synthesized. In the solid- and 'gas'-phases, the parent [24]crown-8-based monomer forms dimeric superstructures, as revealed by X-ray crystallog. and mass spectrometry, resp. Elucidation of the complicated solution-phase behavior of this compound was facilitated by the synthesis and study of both deuterated, and fluorinated, analogs. These investigations revealed that the cyclic dimeric superstructure also dominates in solution, except when extremes of either concentration (low), temperature (high), or solvent polarity (highly polar,

e.g., DMSO) are employed. Upon aggregation, the [24]crown-8-based daisy chain monomers have the capacity to form stereoisomeric superstructures further complicating the study of this series of compds. The assembly of [25]crown-8-based monomers gives only achiral superstructures. The weaker association exhibited between secondary dialkylammonium ions and crown ethers with a [25]crown-8 constitution, however, resulted in limited oligomerization - only dimeric and trimeric superstructures were formed at exptl. attainable concns. - of [25]crown-8-based daisy chain monomers.

RE.CNT 126 THERE ARE 126 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 15 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:840657 CAPLUS

DN 134:100841

TI Modulation of the Cs₂CO₃-promoted catalytic **amination** by a crown ether

AU Torisawa, Yasuhiro; Nishi, Takao; Minamikawa, Jun-Ichi

CS Process Research Laboratory, Second Tokushima Factory, Otsuka Pharmaceutical Co., Ltd, Tokushima, 771-0182, Japan

SO Bioorganic & Medicinal Chemistry Letters (2000), 10(21), 2489-2491
CODEN: BMCLE8; ISSN: 0960-894X

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 134:100841

AB The catalytic addition of 18-crown-6 in some Cs₂CO₃-promoted **amination** of triflates and bromides improved sluggish reactions with suppression of the unwanted side products. The protocol was useful for the preparation of chlorinated arylpiperazines from phenol derivs.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 16 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:742512 CAPLUS

DN 134:42117

TI Efficient Synthesis of N-Aryl-Aza-Crown Ethers via Palladium-Catalyzed **Amination**

AU Zhang, Xiao-Xiang; Buchwald, Stephen L.

CS Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA

SO Journal of Organic Chemistry (2000), 65(23), 8027-8031
CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society

DT Journal

LA English

OS CASREACT 134:42117

AB N-Aryl-aza-crown ethers were efficiently prepared by reaction of an aza-crown ether with an aryl bromide via a palladium-catalyzed **amination**. The combination of Pd₂(dba)₃ and a biphenyl-based electron-rich bulky monophosphine is effective for catalyzing the coupling of 1-aza-15-crown-5 with both electron-deficient and electron-rich aryl bromides under mild conditions. N-Aryl-aza-

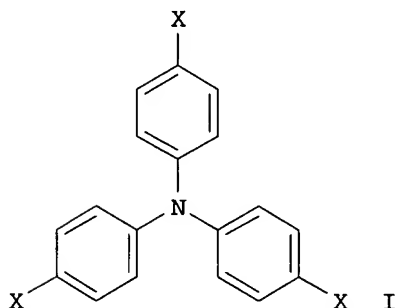
crown ethers were produced in 75-91% yields.

N-Aryl-aza-crown ethers with o-aryl substituents can also be synthesized using this catalyst system, albeit in lower yields (.apprx.40%).

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

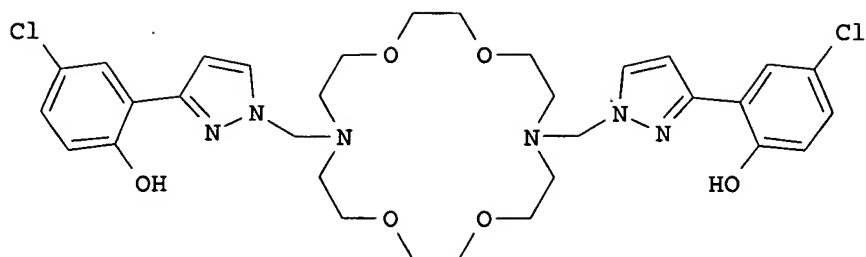
L2 ANSWER 17 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:694287 CAPLUS
DN 133:252152
TI Preparation of 4,4',4''-tris(disubstituted amino)triphenylamines
IN Takahashi, Yoshiko; Kamenno, Isao; Inada, Hiroshi
PA Bando Chemical Industries, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2000273068	A2	20001003	JP 1999-75227	19990319
				JP 1999-75227	19990319
OS	CASREACT 133:252152; MARPAT 133:252152				
GI					

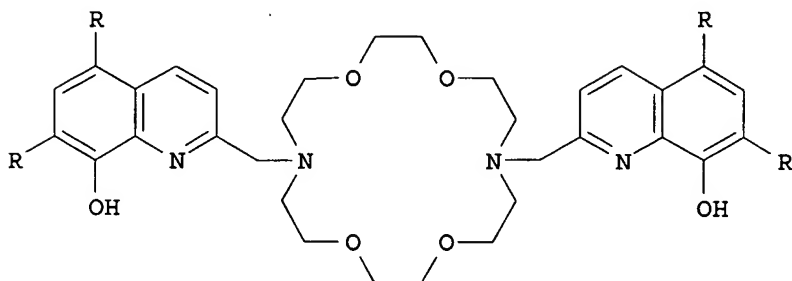


AB Title compds. I (X = NR₁R₂; R₁, R₂ = aryl, aralkyl), useful for electrochromic materials (no data), are prepared by amination of I (X = halo) with ≥3 equiv R₁R₂NH (II; R₁, R₂ = same as I) under inert gas in the presence of alkali metal (bi)carbonates, crown ethers, and Cu fine powders. I (X = iodo) was aminated by II (R₁ = Ph, R₂ = m-tolyl) in the presence of K₂CO₃, Cu powder (average particle size 63 μm), and 16-crown-6 ether at 170° for 12 h to give 68% I (X = NR₁R₂, R₁ = Ph, R₂ = m-tolyl).

L2 ANSWER 18 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:705515 CAPLUS
DN 132:93297
TI Syntheses and Metal Ion Complexation of Novel 8-Hydroxyquinoline-Containing Diaza-18-Crown-6 Ligands and Analogues
AU Su, Ning; Bradshaw, Jerald S.; Zhang, Xian Xin; Song, Huacan; Savage, Paul B.; Xue, Guoping; Krakowiak, Krzysztof E.; Izatt, Reed M.
CS Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT, 84602, USA
SO Journal of Organic Chemistry (1999), 64(24), 8855-8861
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:93297
GI



I



II

AB Ten new 8-hydroxyquinoline-containing diaza-18-crown-6 ligands and analogs were synthesized via a one-pot or stepwise Mannich reaction, reductive amination, or by reacting diaza-18-crown-6 with 5,7-dichloro-2-iodomethyl-8-quinolinol in the presence of N,N-diisopropylethylamine. The Mannich reaction of N,N'-bis(methoxymethyl)diaza-18-crown-6 with 4-chloro-2-(1H-pyrazol-3-yl)phenol gave the NCH₂N-linked bis(3-(5-chloro-2-hydroxy)pyrazol-1-ylmethyl)-substituted diazacrown ether I in a 98% yield. The reaction of bis(N,N'-methoxymethyldiaza)-18-crown-6 with 2.2 equiv of 10-hydroxybenzoquinoline gave only the monosubstituted diazacrown ether ligand. Interaction of some of the ligands with various metal ions was evaluated by a calorimetric titration technique at 25 °C in MeOH. Bis(8-hydroxyquinoline-2-ylmethyl)-substituted ligand II (R = H) forms a very strong complex with Ba²⁺ (log K = 11.6 in MeOH) and is highly selective for Ba²⁺ over Na⁺, K⁺, Zn²⁺, and Cu²⁺ (selectivity factor > 106). The ¹H NMR spectral studies of the Ba²⁺ complexes with bis(8-hydroxyquinoline-2-ylmethyl)- and bis(5,7-dichloro-8-hydroxyquinoline-2-ylmethyl)-substituted diaza-18-crown-6 ligands II (R = H, Cl) suggest that these complexes are cryptate-like structures with the two overlapping hydroxyquinoline rings forming a pseudo second macrocyclic ring. UV-visible spectra of the metal ion complexes with selected ligands suggest that these ligands might be used as chromophoric or fluorophoric sensors.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 19 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:234552 CAPLUS

DN 131:18991

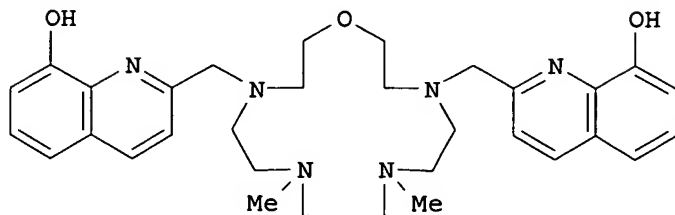
TI New Tetraazacrown Ethers Containing Two Pyridine, Quinoline, 8-Hydroxyquinoline, or 8-Aminoquinoline Sidearms

AU Yang, Zhaoxia; Bradshaw, Jerald S.; Zhang, Xian X.; Savage, Paul B.; Krakowiak, Krzysztof E.; Dalley, N. Kent; Su, Ning; Bronson, R. Todd; Izatt, Reed M.

CS Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT, 84602, USA

SO Journal of Organic Chemistry (1999), 64(9), 3162-3170

PB American Chemical Society
DT Journal
LA English
GI



I

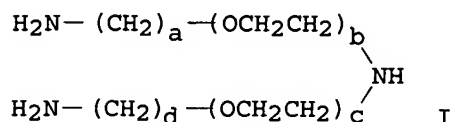
AB Macrocylic tetraazacrown ethers containing two pyridine, quinoline, 8-hydroxyquinoline, or 8-aminoquinoline sidearms have been prepared. Cyclization of bis(α -chloroacetamide)s and diamines followed by reduction of the cyclic diamides was used to synthesize the selected **crown ethers** containing two unsubstituted macro ring nitrogen atoms. Preparation of the macrocycles with sidearms was accomplished by reductive **amination** of the proper aldehydes with the **crown ethers** using $\text{NaBH}(\text{OAc})_3$ as the reducing agent. 8-Hydroxyquinoline- and 8-aminoquinoline-containing macrocycles were synthesized by reductive **amination** of 8-acetoxyquinoline-2-carboxaldehyde or 8-nitroquinoline-2-carboxaldehyde followed by removal of the acetate groups or reduction of the nitro groups to amino groups, resp. Complexation of diquinolinyltetraazacrown ether I with Cu^{2+} , Co^{2+} , Ni^{2+} , Zn^{2+} , Cd^{2+} , and Pb^{2+} was evaluated potentiometrically in aqueous solution at 25° . Ligand I formed very stable complexes with these metal ions. The UV-visible spectra of I and its complexes were examined in an aqueous acetic acid buffer solution. The I- Cu^{2+} complex provided a new absorption band at 258 nm.

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 20 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:171573 CAPLUS
DN 122:31360
TI Synthetic applications of amino SNAr reactions under high-pressure
AU Matsumoto, Kiyoshi
CS Graduate School of Human and Environmental Studies, Kyoto University,
Kyoto, 606-01, Japan
SO Current Japanese Materials Research (1994), 13(High Pressure Liquids and
Solutions), 119-35
CODEN: CJMREW; ISSN: 0963-3480
DT Journal; General Review
LA English
AB A review on high-pressure amino SNAr reaction applications for the
synthetic exploitation of consecutive SNAr-dequaternization reactions as
well as for the synthesis of armed aza-**crown ethers**
that show specific binding properties for Ag^+ ions with 29 refs.

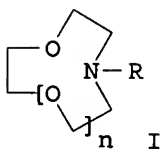
L2 ANSWER 21 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:107080 CAPLUS
DN 120:107080
TI Synthesis of diaza **crown ethers**
IN Champion, Donald H.; Speranza, George P.; Renken, Terry L.
PA Texaco Chemical Co., USA
SO U.S., 6 pp.
CODEN: USXXAM

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 5247078	A	19930921	US 1991-694706	19910502
OS				US 1991-694706	19910502
GI	CASREACT 120:107080; MARPAT 120:107080				



AB The title process comprises the treatment of a poly(ethyleneoxy)amine [bis[(aminoalkoxy)alkyl]aimes], I (a,d = 2,3; R = amino, hydroxy; b,c = 1-4) in the presence of platinum, palladium or nickel catalyst. This process provides a simple one-step or two-step procedure for the preparation of diaza **crown ethers**; residue bottoms from the manufacture of triethylene glycol diamine (Jeffamine EDR-148) can be used as starting materials. Said bottom residues contain hexaethylene glycol triamine and hexaethylene glycol diamine; the latter can be converted to hexaethylene glycol triamine by catalytic **amination**. A reactor charged with hexaethylene glycol triamine(10.0 g), triglyme (10 mL) and 9254/carbon catalyst was heated to 213-217° for 17 h to give almost quant. conversion to 4,13-diaza-16-crown-6.

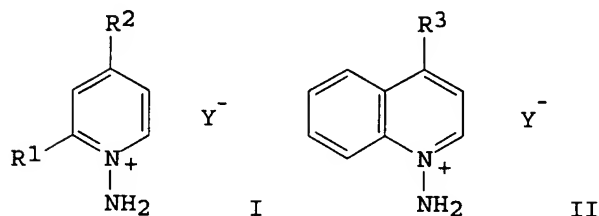
GI



AB A variety of functionalized monoaza-18-crown-6, monoaza-15-crown-5, and monoaza-12-crown-4 ethers I (R = 2-thiazolyl, 2-benzothiazolyl, 2-benzoxazolyl, 4-chloropyridazin-3-yl, 5-trifluoromethyl-2-pyridyl, 2-pyridylmethyl; n = 2, 3, 4) were prepared by high pressure nucleophilic aromatic substitution reactions of I (R = H) with heteroarom. halides in moderate to excellent yields. In a CH₂Cl₂ liquid membrane experiment I (R = 2-thiazolyl, 2-benzothiazolyl, 4-chloropyridazin-3-yl) exhibited perfect Ag⁺ ion selectivity.

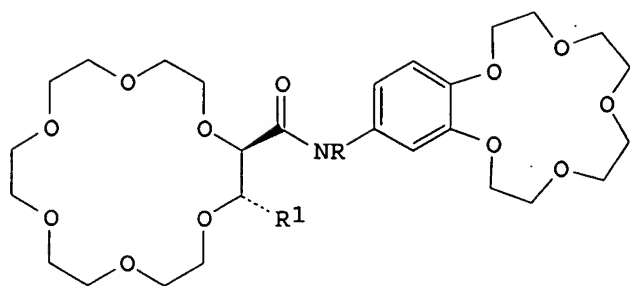
L2 ANSWER 23 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1991:607584 CAPLUS
 DN 115:207584
 TI Efficient direct aromatic **amination** by parent nitrenium ion.
 Photolyses of 1-aminopyridinium and 1-aminoquinolinium salts and effect of **crown ethers**
 AU Takeuchi, Hiroshi; Higuchi, Dai; Adachi, Taki
 CS Fac. Eng., Shinshu Univ., Nagano, 380, Japan
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1991), (6), 1525-9
 CODEN: JCPRB4; ISSN: 0300-922X
 DT Journal
 LA English
 OS CASREACT 115:207584
 GI

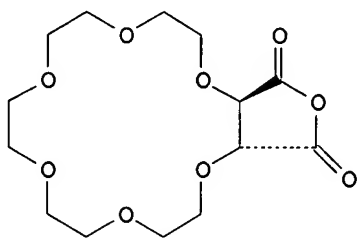


AB Photolyses of 1-aminopyridinium salts I (R1 = H, OMe; R2 = H, CN; R3 = ClO4, iodo, Br, mesitylenesulfonate) 2-aminoisoquinolinium perchlorate, and 1-aminoquinolinium salts II (R3 = H, Me, Cl, Y = ClO4, iodo, Br, mesityl(sulfonate)ene gave aniline or a mixture of 2-, 3-, and 4-toluidines in benzene-trifluoroacetic acid (TFA) or in toluene-TFA, resp. The use of 1-aminoquinolinium perchlorate II (R3 = H, Y = ClO4) showed the highest yield in these photolyses. Irradiation of II (R3 = H, Y = ClO4) in the presence of ethylbenzene, p-xylene, mesitylene, anisole and chlorobenzene similarly yielded arylamines. The yields of arylamines were generally increased in the presence of a small amount of crown ether. The aromatic **amination** is discussed in terms of the intermediacy of a parent nitrenium ion.

L2 ANSWER 24 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1991:471563 CAPLUS
 DN 115:71563
 TI Synthesis of a series of functionalized bis-**crown ethers**
 AU Dugas, H.; Vaugois, J.
 CS Dep. Chim., Univ. Montreal, Montreal, QC, H3C 3J7, Can.
 SO Synthesis (1991), (5), 420-2
 CODEN: SYNTBF; ISSN: 0039-7881
 DT Journal
 LA English
 OS CASREACT 115:71563
 GI



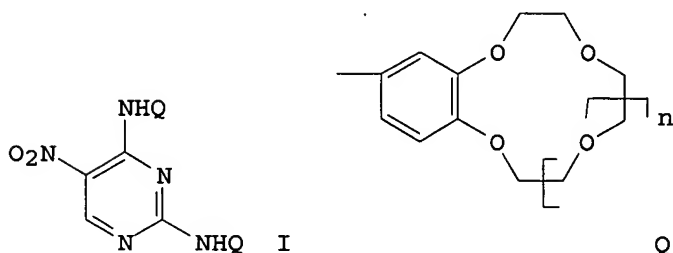
I



II

AB Bis-crown ethers, e.g. I ($R = H$, $R1 = \text{CONHCH}_2\text{CH}_2\text{NH}_2$), were prepared. Thus, amination of crown ether anhydride II with 4'-aminobenzo-[15]-crown-5 gave I ($R = H$, $R1 = \text{CO}_2\text{H}$) which underwent intramol. cyclocondensation to give I ($RR1 = \text{CO}$) which condensed with $\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2$ to give I ($R = H$, $R1 = \text{CONHCH}_2\text{CH}_2\text{NH}_2$).

L2 ANSWER 25 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1991:122326 CAPLUS
 DN 114:122326
 TI Bis-crown ethers containing pyrimidine ring. (I)
 AU Lu, Guoyuan; Wang, Defeng; Hu, Houngheng
 CS Dep. Chem., Nanjing Univ., Nanjing, Peop. Rep. China
 SO Nanjing Daxue Xuebao, Ziran Kexue (1990), 26(2), 348-51
 CODEN: NCHPAZ; ISSN: 0469-5097
 DT Journal
 LA Chinese
 OS CASREACT 114:122326
 GI

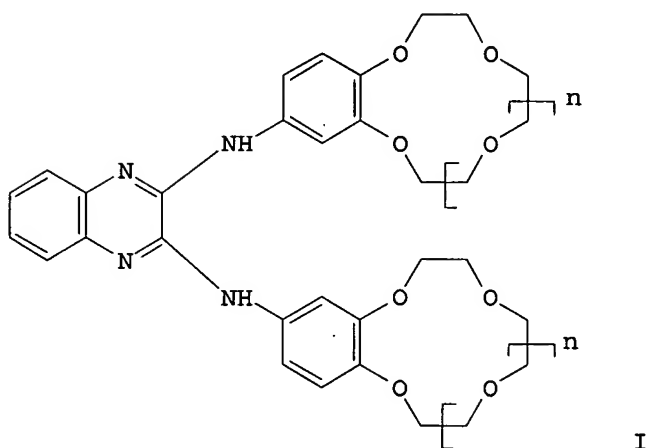


Q

AB Title compds. I ($n = 1, 2, 3$) were prepared by condensation of 2,4-dichloro-5-nitropyrimidine with QNH₂. I ($n = 1, 2$) showed high extractive power for sodium and potassium resp.

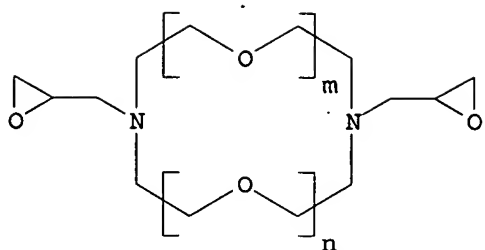
L2 ANSWER 26 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1991:122321 CAPLUS
 DN 114:122321
 TI Synthesis and complex properties of the biscrown ethers containing a quinoxaline ring

AU Zhu, Chunsheng; Lu, Guoyuan; Zhu, Huixiang; Wang, Defen; Hu, Hongwen
 CS Dep. Chem., Nanjing Univ., Nanjing, Peop. Rep. China
 SO Huaxue Shiji (1990), 12(4), 207-9
 CODEN: HUSHDR; ISSN: 0258-3283
 DT Journal
 LA Chinese
 GI

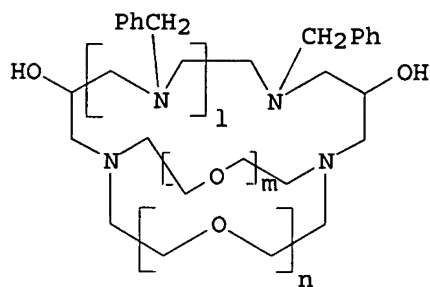


AB Title bis-crown ethers I ($n = 1, 2, 3$) were synthesized by the reaction of 4'-aminobenzo-12-crown-4, 4'-aminobenzo-15-crown-5 and 4'-aminobenzo-18-crown-6 with 2,3-dichloroquinoxaline resp. Conductance studies showed that these biscrown ethers form 2:1 (crown ether units : metal ion) complexes with sodium, potassium, rubidium and cesium salts resp. The ratio of distribution and the extraction equilibrium consts. of the title compds. with these salts in chloroform have been evaluated.

L2 ANSWER 27 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1990:478367 CAPLUS
 DN 113:78367
 TI Macroheterocycles. 49. A simple cryptand synthesis based on intramolecular macrocyclization
 AU Luk'yanenko, N. G.; Reder, A. S.
 CS Fiz. Khim. Inst. im. Bogatskogo, Odessa, 270080, USSR
 SO Khimiya Geterotsiklicheskikh Soedinenii (1989), (12), 1673-5
 CODEN: KGSSAQ; ISSN: 0453-8234
 DT Journal
 LA Russian
 OS CASREACT 113:78367
 GI



I



II

AB Treating diazacrown ethers I ($m = 1, n = 1, 2; m = n = 2$) with PhCH_2NHR ($R = \text{H}, \text{CH}_2\text{CH}_2\text{NHCH}_2\text{Ph}$) in alc. gave 62-85% cryptands II ($m = 1, n = 1, 2, l = 0; m = n = 2, l = 0; m = n = 2, l = 1$).

L2 ANSWER 28 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1990:198343 CAPLUS

DN 112:198343

TI Bis-crown ether containing pyrimidine ring. (II)

AU Lu, Guoyuan; Wang, Defen; Hu, Hongwen

CS Dep. Chem., Nanjing Univ., Nanjing, Peop. Rep. China

SO Gaodeng Xuexiao Huaxue Xuebao (1989), 10(8), 812-16

CODEN: KTHPDM; ISSN: 0251-0790

DT Journal

LA Chinese

AB Six bis-crown ethers containing benzo-12-crown-4, benzo-15-crown-5 and benzo-18-crown-6 moieties bridged by a pyrimidine ring were prepared by the reaction of 4,6-dichloro-5-nitropyrimidine or 2,4-dichloro-5-nitro-6-methylpyrimidine with the 4'-aminobenzocrown ethers, resp. Extns. were carried out with aqueous solns. of alkali metal picrates with these bis-crown ether solns. in CHCl_3 . The extraction equilibrium

constns. were also evaluated. The title compound are effective extracting reagents for Na, K, and Cs, resp. The cation-selectivity is more effective than the corresponding monocyclic crown ethers

L2 ANSWER 29 OF 41 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1989:192345 CAPLUS

DN 110:192345

TI High-molecular-weight catalysts in organic synthesis. XIX. New method of synthesis of polymer-supported crown ethers and their application in organic synthesis

AU Roska, A.; Klavins, M.; Zicmanis, A.

CS VNII Prikl. Biokhim., USSR

SO Latvijas PSR Zinatnu Akademijas Vestis, Kimijas Serija (1988), (4), 458-63

CODEN: LZAKAM; ISSN: 0002-3248

DT Journal

LA Russian

AB Chloromethylated styrene-divinylbenzene copolymer condensed with excess piperazine in DMF at 90° to give 100% piperazinomethylated copolymer (I), which reacted with aqueous HCHO and benzo-12-crown-4,

-15-crown-5 or -18-crown-6 or with dibenzo-18-crown-6 or -24-crown-8 to give polymer-bound **crown ethers**. A math. model was derived to describe the latter process, which gave optimum yields of 98.5% after 4 h at 60° with 1:4.0:1.5 I-HCHO-crown ether. These products were effective catalysts for the Claisen-Schmidt condensation of p-Me₂NC₆H₄CHO with MeNO₂ in alc. NH₄OAc to give p-Me₂NC₆H₄CH:CHNO₂, the Knoevenagel condensation of PhCHO with NCCH₂CO₂Et in MeCN containing KOAc to give PhCH:C(CN)CO₂Et, and PhOH alkylation with BuBr in PhMe containing KOH to give PhOBu, yielding 79-96% products.

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Executing the logoff script...

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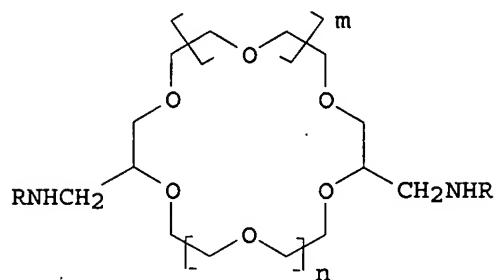
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FULL ESTIMATED COST	0.48	120.30
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-30.66

STN INTERNATIONAL LOGOFF AT 18:26:57 ON 19 AUG 2005

AN 1984:571295 CAPLUS
 DN 101:171295
 TI **Crown ethers** having a bisaminomethyl group
 PA Ajinomoto Co., Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59062583	A2	19840410	JP 1982-171662	19820930
	JP 03029075	B4	19910423		
GI				JP 1982-171662	19820930



AB Title compds. I (R, m, n = C₆H₁₃, 0, 1; C₆H₁₃, 0, 2; C₆H₁₃, 1, 1; H, 0, 1; Et, 0, 1; Et, 1, 2) were prepared by reaction of RNHCH₂CH(OH)CH₂OCH₂(CH₂OCH₂)_mCH₂OCH₂CH(OH)CH₂NHR (II) with XCH₂(CH₂OCH₂)_nCH₂X III [X = halo, OSO₂R₁ (R₁ = alkyl, aryl, aralkyl)] in the presence of metal compds. having molding effect. Thus, 11.3 g II (R = C₆H₁₃, m = 0) was refluxed with 1.38 g Na in n-BuOH 1 h, 12.4 g III (X = TsO, n = 1) in dioxane added during 1.5 h at 60°, and the whole kept 2 h at 60° to give 62% I (R = C₆H₁₃, m = 0, n = 1).